

Curriculum Vitae

Dr. rer. nat. Katharina Ruthsatz

Personal information:

Name: Katharina Ruthsatz
Date of birth: 02.09.1989, Itzehoe
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Education:

2009 – 2012 **Universität Hamburg; Bachelor's programme**
Course of Study: Biology, German philology (teacher training)
Degree: Bachelor of Science
Thesis: Die Biologie der eierlegenden Säugetiere (1.0)

2012 – 2015 **Universität Hamburg; Master's programme**
Course of Study: Biology, German philology (teacher training)
Degree: Master of Education
Thesis: Food quality induces plasticity in intestinal morphology of tadpoles of the common frog (*Rana temporaria*) (1.0; published as Ruthsatz et al. 2019a)

2015 – 2018 **Universität Hamburg; Doctoral studies**
Degree: Dr. rer. nat.
Thesis (cumulative): Amphibians in a changing world: an ecophysiological perspective on amphibian metamorphosis (1.0; magna cum laude)
Articles published: 3 (Ruthsatz et al. 2018a,b,c)
Further articles submitted: 3

Scientific career:

10/2015 – 09/2018 **Research associate; Universität Hamburg**
Ecology & Energetics (Dausmann lab)

01/2019 – 06/2019 **Postdoc; Universität Hamburg**
Animal Conservation & Ecology (Ganzhorn lab)

07/2019 – 06/2020 **Postdoc; Universität Hamburg**
Animal Conservation & Ecology (Ganzhorn lab)
Funded by PostDoc1st award

07/2020 – present
(2 x 3 years on fixed-term contract) **Assistant Professor; TU Braunschweig**
Evolutionary Biology (Vences lab)

Academic distinctions:

06/2019 **PostDoc1st**
 Advancement award of the Department of Biology (Universität Hamburg) for an excellent doctoral thesis
 Fund: 4,500 €, 1-year Postdoc position

Scholarships and grants:

09/2015 **Reisekostenzuschuss aus dem Körperschaftsvermögen der Universität Hamburg**
 For participation in 108th Annual Meeting of the German Zoological Society (DZG) in Graz (AUT)

09/2017 **Reisekostenzuschuss aus dem Körperschaftsvermögen der Universität Hamburg**
 For participation in SEH 2017 19th European Congress of Herpetology in Salzburg (AUT)

03/2020 **German Academic Exchange Service (DAAD)**
 Short-term fellowship for Postdoctoral researchers at the University of Massachusetts in Boston (USA), 6 months

03/2021 **German Research Foundation (DFG)**
 Research Grants Programme Individual Proposal, New Proposal/Establishment Proposal

Scientific memberships and further activities:

- since 2020 – present
- **Deutsche Gesellschaft für Herpetologie und Terrarienkunde DGHT**
 (AG Anuren; AG Feldherpetologie und Artenschutz)
 - **Societas Europaea Herpetologica SEH**
 - **Deutsche Zoologische Gesellschaft DZG**
 (AG Ökologie)
 - **Society of Comparative and Integrative Biology**
 - **Nationaler Pakt für Frauen in MINT-Berufen "Komm, mach MINT!"**
Representative
<https://www.komm-mach-mint.de/schuelerinnen/erfahrungsberichte/interviews/katharina3>
 - **Global Women in Herpetology Project**
Contributor
<https://www.womeninherpetology.com/>

Review services:

- Reviews for journals:
- Amphibia-Reptilia (3)
 - Aquaculture (2)
 - Biological Journal of the Linnean Society (1)

- Frontiers in Zoology (3)
- Journal of Comparative Physiology B (2)
- Journal of Thermal Biology (2)
- Journal of Zoology (1)
- Salamandra (2)
- Herpetozoa (1)
- Molecular and Cellular Endocrinology (1)
- Scientific Reports (1)
- ISME Communications (1)
- Environmental Pollution (1)

Number of supervised students:

Bachelor theses 14 (of which 5 ongoing)
 Master theses 8 (of which 3 ongoing)

Publications:

Total no. of publications: 11
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Contributions to congresses:

- 09/2015 **108th Annual Meeting of the German Zoological Society (DZG) September 10.-15., 2018 in Graz (AUT)**
 • Oral presentation: Food quality induces plasticity in oral and intestinal morphology in larval amphibians
- 09/2017 **SEH 2017 19th European Congress of Herpetology September 18.-23., 2017 in Salzburg (AUT)**
 • Oral presentation: Environmental stress as an endocrine disrupter in tadpoles of *Xenopus laevis* and *Rana temporaria*
- 09/2018 **111th Annual Meeting of the German Zoological Society (DZG) September 10.-15., 2018 in Greifswald (GER)**
 • Oral presentation: Altered thyroid hormone levels and developmental temperature affect the capacity for physiological acclimation in tadpoles of *Rana temporaria* and *Xenopus laevis*
- 11/2018 **International Conference of the German Herpetological Society (DGHT) November 24 -25., 2018 in Muenster/Westfalen (GER)**
 • Oral presentation: Environmental temperature and developmental plasticity of the common frog (*Rana temporaria*)
- 09/2019 **SEH 2019 20th European Congress of Herpetology September 02.-07., 2019 in Milan (I)**
 • Oral presentation: Energetic efficiency of metamorphosis in *Rana temporaria*
- 01/2020 **9th World Congress of Herpetology January 5.-10., 2020 in Dunedin (NZL)**
 • Oral presentation: Endocrine disruption alters developmental body condition, energy allocation, and juvenile performance in *Rana temporaria*

- Poster 1: Endocrine disruption affects the physiological ontogeny of a wide-spread European anuran.
- Poster 2: Energetic efficiency of metamorphosis in *Rana temporaria*

01/2021

**Annual Meeting of the Society of Comparative and Integrative Biology
January 3.- February 28., 2021 in Washington D.C. (USA) – virtual meeting**

- Oral presentation: Potential of thermal tolerance plasticity as a coping mechanism with global warming in amphibians

09/2021

**113th Annual Meeting of the German Zoological Society (DZG)
August 30.-September 3., 2021, – virtual meeting**

- Poster: Ontogenetic thermal tolerance and acclimation capacity in *Rana temporaria*

Teaching experience:

Universität Hamburg

- 61-706 Organisationsformen im Tierreich Lehramt (WiSe 2015/16-2019/20)
- 61-029 Praktikum Ökologie (SoSe 2019)
- 61-759 Schulversuche in der Biologie (WiSe 2018/19; SoSe 2019)
- 61-028 Biostatistische Übungen (SoSe 2018;2019)
- 61-012 Organisationsformen im Tierreich (SoSe 2016-2019)
- 61-032 Übungen zur Grundvorlesung Biostatistik für Molecular Life Science (WiSe 2018/19; 2019/20)
- 61-026 Grundvorlesung Biostatistik für Molecular Life Science (SoSe 2018; 2019)
- 61-910 Biologie für Geowissenschaftler (WiSe 2018/19)
- 61-911 Biologisches Vertiefungspraktikum für Studierende der Geowissenschaften (WiSe 2018/19)

Technische Universität
Braunschweig

- Bio-BD 02 Grundvorlesung Zoologie (WiSe 2019/20;2020/21; 2021/22)
- Bio-GE 25 Molekulare Phylogenetik (SoSe 2020)
- Bio-BD 08 Morphologie und Systematik der Tiere I (SoSe 2021)
- Biodiversität und Evolution (WiSe 2020/21;2021/22)

Skills

Languages

- German, native
- English, fluent written and spoken

Computer

- Operating systems: Windows, Linux, Mac
- Office suites: Microsoft Office (Word, Excel, PowerPoint)
- Analytics: R, Python, SPSS, PAST
- Transcriptomic (microarrays/ RNAseq: Trinity, Bowtie, DRAP, Bioconductor, Trinity, Annocript, Blast+); beginner
- Genomics (Illumina Miseq data: Qime2, Deblur, Mothur, LEfSE); beginner
- Graphic Design: Adobe Illustrator
- Film cutting and editing

Laboratorial

- Amphibian Husbandry
- Water-borne Hormone Extraction
- Solid-phase Extraction (SPE)
- Closed Respirometry
- Thermal Tolerance
- Microdissection
- Live food culturing

Publication list

2018

- **Ruthsatz K**, Peck MA, Dausmann KH, Sabatino NM & Glos J (2018a) Patterns of temperature induced developmental plasticity in anuran larvae. *J Therm Biol* 74:123-132. <https://doi.org/10.1016/j.jtherbio.2018.03.005>
- **Ruthsatz K**, Dausmann KH, Drees C, Becker LI, Hartmann L, Reese J, Sabatino NM, Peck MA & Glos J (2018b) Altered thyroid hormone levels affect body condition at metamorphosis in larvae of *Xenopus laevis*. *J Appl Toxicol* 38:1416-1425. <https://doi.org/10.1002/jat.3663>
- **Ruthsatz K**, Dausmann KH, Peck MA, Drees C, Sabatino NM, Becker LI, Reese J, Hartmann L & Glos J (2018c) Thyroid hormone levels and temperature during development alter thermal tolerance and energetics of *Xenopus laevis* larvae. *Conserv Physiol* 6:coy059. <https://doi.org/10.1093/conphys/coy059>

2019

- **Ruthsatz K**, Giertz LM, Schröder D & Glos J (2019a) Chemical composition of food induces plasticity in digestive morphology in larval amphibians. *Biol Open* 8(12). <https://doi.org/10.1242/bio.048041>
- **Ruthsatz K**, Dausmann KH, Reinhardt S, Robinson T, Sabatino NM, Peck M & Glos J (2019b) Endocrine disruption alters developmental energy allocation and performance in *Rana temporaria*. *Integr Comp Biol* 59:70- 88. <https://doi.org/10.1093/icb/icz041>

2020

- **Ruthsatz K**, Dausmann KH, Reinhardt S, Robinson T, Sabatino NM, Peck MA & Glos J (2020a) Altered thyroid hormone levels affect the capacity for temperature-induced developmental plasticity of *Rana temporaria* and *Xenopus laevis*. *J Therm Biol* 102599. <https://doi.org/10.1016/j.jtherbio.2020.102599>
- **Ruthsatz K**, Dausmann KH, Reinhardt S, Robinson T, Sabatino NM, Peck M & Glos J (2020b) Post-metamorphic carry-over effects of altered thyroid hormone level and developmental temperature: Physiological plasticity and body condition at two life stages in *Rana temporaria*. *J Comp Physiol B* 1-19. <https://doi.org/10.1007/s00360-020-01271-8>
- Glos J, **Ruthsatz K**, Schröder D, Riemann JC (2020c) Food source determines stable isotope discrimination factors ΔN and ΔC in tadpoles. *Amphibia-Reptilia* 1(aop):1-7. <https://doi.org/10.1163/15685381-bja10020>
- **Ruthsatz K**, Dausmann KH, Paesler K, Babos P, Sabatino NM, Peck MA, Glos J (2020d) Shifts in sensitivity of amphibian metamorphosis to endocrine disruption: the common frog (*Rana temporaria*) as a case study. *Conserv Physiol* 8:coaa100. <https://doi.org/10.1093/conphys/coaa100>
- **Ruthsatz K**, Lyra ML, Lambertini C, Belasen AM, Jenkinson TS, da Silva Leite D, Becker CG, Haddad CFB, James TY, Zamudio

KR, Toledo LF, Vences M (2020e) Skin microbiome correlates with bioclimate and *Batrachochytrium dendrobatidis* infection intensity in Brazil's Atlantic Forest treefrogs. *Sci Rep* 10(1):1-15. <https://doi.org/10.1038/s41598-020-79130-3>

2021

- **Ruthsatz K, Scherz MD, Vences M (2021)** Dissecting the tree of life: the prospect of open-access digital resources in morphology, anatomy and taxonomy in training the next generation of zoologists. *Zootaxa* 5016(3):448-450. <https://doi.org/10.11646/ZOOTAXA.5016.3.10>